

Utah Health Science & Technology Education

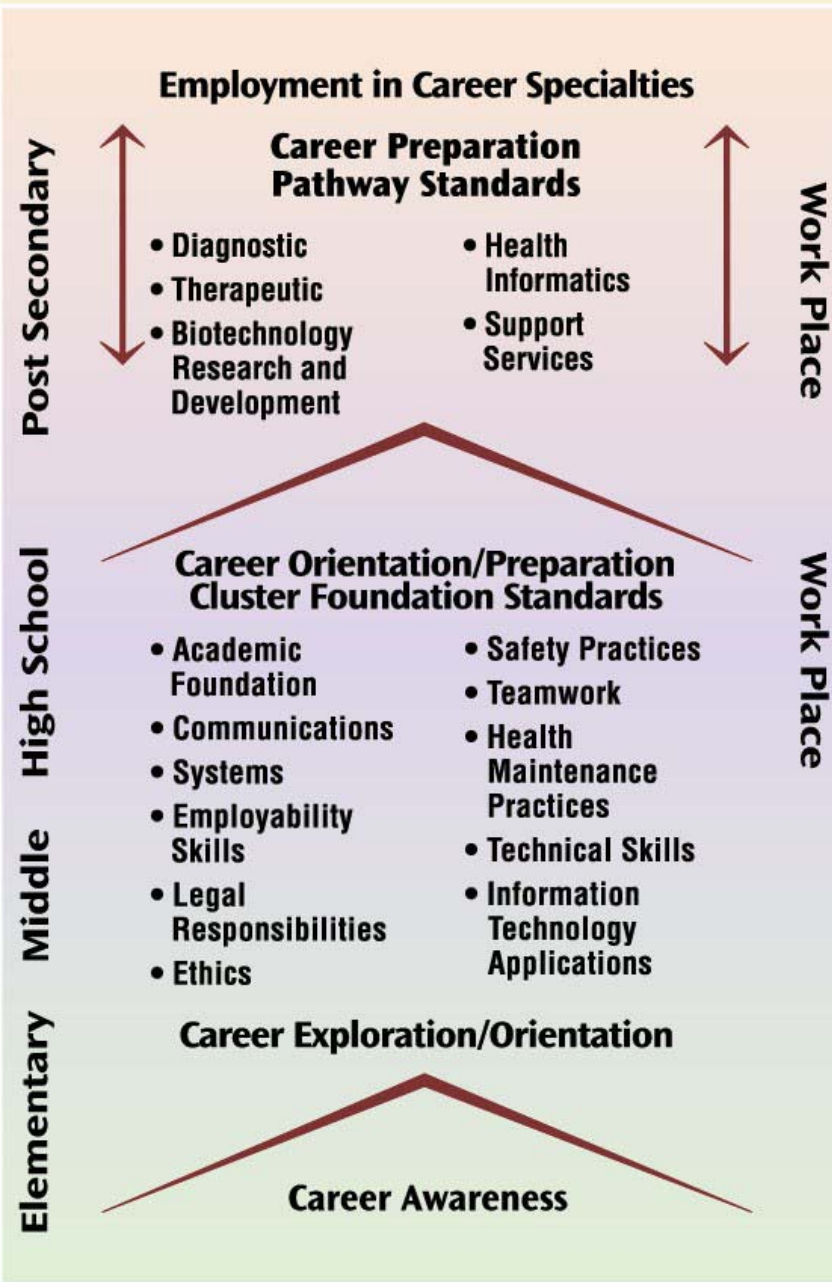
**Jordan High School
June 22, 2003**



**Presented by:
Rachel Eborn**

Health Science Career Cluster

Places of Learning



Places of Learning





Health Science Career Cluster

Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Sample Career Specialties/Occupations	<ul style="list-style-type: none"> ♦ Acupuncturist ♦ Anesthesiologist Assistant ♦ Art / Music / Dance Therapist(s) ♦ Athletic Trainer ♦ Audiologist ♦ Certified Nursing Assistant ♦ Chiropractor ♦ Dental Assistant / Hygienist ♦ Dental Lab Technician ♦ Dentist ♦ Dietician ♦ Dosimetrist ♦ EMT ♦ Exercise Physiologist ♦ Home Health Aide ♦ Kinesiotherapist ♦ Licensed Practical Nurse ♦ Massage Therapist ♦ Medical Assistant ♦ Mortician ♦ Occupational Therapist / Asst ♦ Ophthalmic Medical Personnel ♦ Optometrist ♦ Orthotist/Prosthetist ♦ Paramedic ♦ Pharmacist/Pharmacy Tech ♦ Physical Therapist / Assistant ♦ Physician (MD/DO) ♦ Physician's Assistant ♦ Psychologist ♦ Recreation Therapist ♦ Registered Nurse ♦ Respiratory Therapist ♦ Social Worker ♦ Speech Language Pathologist ♦ Surgical Technician ♦ Veterinarian / Vet Tech 	<ul style="list-style-type: none"> ♦ Cardiovascular Technologist ♦ Clinical Lab Technician ♦ Computer Tomography (CT) Technologist ♦ Cytogenetic Technologist ♦ Cytotechnologists ♦ Diagnostic Medical Sonographers ♦ Electrocardiographic (ECG) Technician ♦ Electronic Diagnostic (EEG) Technologist ♦ Exercise Physiologist ♦ Geneticist ♦ Histotechnician ♦ Histotechnologist ♦ Magnetic Resonance (MR) Technologist ♦ Mammographer ♦ Medical Technologist / Clinical Laboratory Scientist ♦ Nuclear Medicine Technologist ♦ Nutritionist ♦ Pathologist ♦ Pathology Assistant ♦ Phlebotomist ♦ Positron Emission Tomography (PET) Technologist ♦ Radiologic Technologist/Radiographer ♦ Radiologist 	<ul style="list-style-type: none"> ♦ Admitting Clerk ♦ Applied Researcher ♦ Community Services Specialists ♦ Data Analyst ♦ Epidemiologist (SHSMD Stratsociety.org) ♦ Ethicist ♦ Health Educator ♦ Health Information Coder ♦ Health Information Services ♦ Healthcare Administrator ♦ Medical Assistant ♦ Medical Biller/Patient Financial Services ♦ Medical Information Technologist ♦ Medical Librarian/Cybrarian ♦ Patient Advocates ♦ Public Health Educator ♦ Reimbursement Specialist (HFMA) ♦ Risk Management ♦ Social Worker ♦ Transcriptionist ♦ Unit Coordinator ♦ Utilization Manager 	<ul style="list-style-type: none"> ♦ Biomedical / Clinical Engineer ♦ Biomedical / Clinical Technician ♦ Central Services ♦ Environmental Health and Safety ♦ Environmental Services ♦ Facilities Manager ♦ Food Service ♦ Hospital Maintenance Engineer ♦ Industrial Hygienist ♦ Materials Management ♦ Transport Technician 	<ul style="list-style-type: none"> ♦ Biochemist ♦ Bioinformatics Associate ♦ Bioinformatics Scientist ♦ Bioinformatics Specialist ♦ Biomedical Chemist ♦ Biostatistician ♦ Cell Biologist ♦ Clinical Trials Research Associate ♦ Clinical Trials Research Coordinator ♦ Geneticist ♦ Lab Assistant-Genetics ♦ Lab Technician ♦ Microbiologist ♦ Molecular Biologist ♦ Pharmaceutical Scientist ♦ Quality Assurance Technician ♦ Quality Control Technician ♦ Regulatory Affairs Specialist ♦ Research Assistant ♦ Research Associate ♦ Research Scientist ♦ Toxicologist
Pathways	Therapeutic Services	Diagnostics Services	Health Informatics	Support Services	Biotechnology Research and Development
Cluster K & S	<p style="text-align: center;">Cluster Knowledge and Skills</p> <p style="text-align: center;">♦ Academic Foundation ♦ Communications ♦ Systems ♦ Employability Skills ♦ Legal Responsibilities ♦ Ethics ♦ Safety Practices ♦ Teamwork ♦ Health Maintenance Practices ♦ Technical Skills ♦ Information Technology Applications</p>				

MISSION STATEMENT...

Provide All Students

A

Seamless Education System

Driven By A

Student Education Occupation Plan (SEOP)

Through

Competency-Based Instruction

Culminating In

Essential Life Skills, Certified Occupational Skills,

And

Meaningful Employment.

HST Program...

Health Science and Technology (HST) Education is a secondary program that motivates and prepares students for pursuit of a health care profession. The program is based on:

- Employment needs of the health care community.
- Individual needs of students.
- National Health Care Skill Standards.
- Health care leadership and technical skills.
- Postsecondary education requirements.

Health Care Trends

■ National

- 2010 - 76 Million Medicare Eligible
- 2010 - 1 out of 6 jobs will be related to healthcare.
- Critical shortages currently exist.
- Industry focus will include Biotechnology and Pharmaceuticals.

■ Utah

- Health Services Industry (New Jobs):
 - 40% of new jobs will occur in the services sector.
 - 23% of these will be in the health services industry alone.
- Rural communities create rural healthcare providers.

Continuum of Training / Education

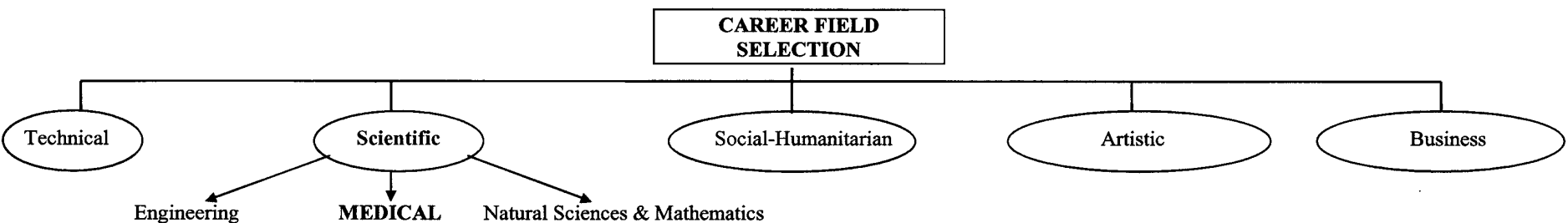
- Public Education (K-12)
- Utah College of Applied Technology
- Colleges
- Universities

UTAH HEALTH SCIENCE & HEALTH TECHNOLOGY EDUCATION

CAREER EXPLORATION/AWARENESS
(State Core Career Connections)

COMPREHENSIVE COUNSELING & CAREER GUIDANCE
Student Education Occupation Plan (SEOP)

CAREER GOAL



TECHNOLOGY, LIFE, & CAREERS
Grade 7

**INTRODUCTION TO
HEALTH SCIENCE & HEALTH TECHNOLOGY**
Grades 9-10

**MEDICAL
ANATOMY AND
PHYSIOLOGY**
Grade 11
(Concurrent Enrollment)

**ADVANCED
HEALTH SCIENCE**
Grade 12
(Concurrent Enrollment)

**POST SECONDARY
HEALTH SCIENCE**
• Associate
• Baccalaureate & Beyond

**HEALTH TECHNOLOGY
PROGRAMS**
• Certificated Programs
High School/ATC
College/University

SUPPORT COURSES

- Medical Terminology (CE)
- Intro to EMS (CE)
- Ex Sci/Sports Medicine (CE)
- Biotechnology (CE)
- American Sign Language 1 & 2
- Related Work-based Learning
- Apprenticeship

EMPLOYMENT

- Therapeutic
- Diagnostic
- Health Informatics
- Support Services
- Biotechnology

K-12 ATTAINMENTS

**CAREER PATH
PROGRESSION**

**PERFORMANCE
STANDARDS**
• Skill Certification

LIFE SKILLS

- Lifelong Learning
- Complex Thinking
- Effective Communication
- Collaboration
- Responsible Citizenship
- Employability

**STATE CORE
"Connections"**

DIPLOMA

NATIONAL HEALTH CARE (Foundation) SKILL STANDARDS

Academic Foundation	Communications	Employability Skills
Legal Responsibilities	Systems	Safety Practices
Teamwork	Ethics	Health Maintenance
Technical Skills	InfoTech Applications	

ITEMS OF INTEREST:

- Awareness – Exploration – Orientation – Preparation - Practice
- Higher Levels of English/Language Arts, Mathematics and Science are Encouraged
- Health Occupations Students of America (HOSA)
- State Core Career Connections (Integrated Curriculum)
- Standards-based Curriculum (Electronically Delivered)
- Skill Certificates (National, State, Utah Endorsed) - Multi-Measure Assessment
- Work-based Learning
- Health Care Industry and Education Partnerships (AHEC)
- Concurrent Enrollment and Articulation
- Professional Development

Standards-based

- National Healthcare Foundation Skill Standards
 - Introduction to HST
 - Medical Anatomy & Physiology (MAP)
 - Health Occupations Professional Essentials (HOPE)
 - First Aid & CPR
- Biotechnology
- Exercise Science / Sports Medicine
- Dental, Medical & Nurse Assisting

Program Components

- Integration
- Work-based Learning
- Skill Certification
- Concurrent Enrollment / Articulation
- Electronic Delivery

*Program Components Are Partnership Based

Integration

- National Model Integrated Into All Academic Disciplines (K-12)
- K-8 Core Career Connections
- State Science & Health “Core” Integration

Work-based Learning

- Component of All HST Programs
 - Hands-on
 - Simulation
 - Electronic
- Requirement for Programs Offering Certification, Registration or Licensure
- Legislation to Support Liability & Funding

Skill Certification

- Demonstrates the Effectiveness of Applied Technology Education
- Improve Quality of Programs
- Accountable for Funding Generation
- Key Components Prior to Implementation
 - Standards Identified and Validated by Industry
 - Curriculum Alignment
 - Assessment Validation
 - Instructor Training

Assessment / Certificate Program

National Occupational Competency Testing Institute (NOCTI)

- In Partnership with NCHSTE & National HOSA
- Cluster Foundation Standards
- Portable, Recognized & Valued by Stakeholders
- Internet Accessible
- Portfolio Component
- Pre-test
- Post-test
- HOPE Pilots

Concurrent Enrollment

- Dual Credit Issued (High School & College)
- Adjunct Faculty
- Courses Offering Concurrent Enrollment:
 - Medical Anatomy & Physiology
 - Medical Terminology
 - Advanced Health Science
 - Biotechnology
 - Introduction to Emergency Medical Services
 - Exercise Science/Sports Medicine
- Career Path Progression / Articulation

For Additional Information

Visit Utah's HST Homepage at
www.usoe.k12.ut.us/ate/HST/hst.htm

or contact Scott Snelson at

Utah State Office of Education

PO Box 144200

Salt Lake City, UT 84114-4200

(801) 538-7889

www.ssnelson@usoe.k12.ut.us

